

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 23 DEC 2004

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Applicant's or agent's file reference 100700.25PCT	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. PCT/US03/11951	International filing date (day/month/year) 16 April 2003 (16.04.2003)	Priority date (day/month/year)
International Patent Classification (IPC) or national classification and IPC IPC(7): A23L 1/28, 2/00; A61K 7/42 and US Cl.: 426/655, 590; 424/59		
Applicant VDF FUTURECEUTICALS		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

Date of submission of the demand

12 November 2004 (12.11.2004)

Date of completion of this report

10 December 2004 (10.12.2004)

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# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US03/11951

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

☐ international search (under Rules 12.3 and 23.1(b))

☐ publication of the international application (under Rule 12.4)

☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-22 as originally filed/furnished

pages\* NONE received by this Authority on \_\_\_\_\_

pages\* NONE received by this Authority on \_\_\_\_\_

☒ the claims:

pages NONE as originally filed/furnished

pages\* 23 and 24 as amended (together with any statement) under Article 19

pages\* NONE received by this Authority on \_\_\_\_\_

pages\* NONE received by this Authority on \_\_\_\_\_

☒ the drawings:

pages 1/3-3/3 as originally filed/furnished

pages\* NONE received by this Authority on \_\_\_\_\_

pages\* NONE received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

*\* If item 4 applies, some or all of those sheets may be marked "superseded."*

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/US03/11951

## Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims <u>1-20</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-20</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-20</u>	YES
	Claims <u>NONE</u>	NO

### 2. Citations and Explanations (Rule 70.7)

Claims 1-20 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the use of a coffee cherry or an extract of coffee cherry (and not just the bean or shell of same) is added to a food product.

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus the method of producing a coffee cherry containing food product has industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----

**CLAIMS**

What is claimed is:

1. A method of manufacture of a food product comprising at least one step in which a coffee cherry or an extract of the coffee cherry is included into the food product.
2. The method of claim 1 wherein the coffee cherry is a sub-ripe coffee cherry.
3. The method of claim 1 further comprising a step of quick-drying the coffee cherry.
4. The method of claim 1 further comprising a step of comminuting the coffee cherry.
5. The method of claim 1 wherein the coffee cherry has a mycotoxin level of less than 20 ppb for total aflatoxins, of less than 10 ppb for total ochratoxins, and of less than 5 ppm for total fumonisins.
6. The method of claim 1 wherein the extract is prepared by contacting the coffee cherry with a solvent, and optionally evaporating the solvent.
7. The method of claim 6 wherein the solvent is an aqueous solvent.
8. The method of claim 1 wherein the food product is a beverage.
9. The method of claim 8 wherein the food product is selected from the group consisting of a tea, a juice, and a carbonated beverage.
10. A method of isolating a nutrient from a coffee plant, comprising:  
providing a coffee cherry and comminuting the coffee cherry; and  
contacting the comminuted coffee cherry with at least one solvent to produce an  
extract that includes the nutrient.
11. The method of claim 10 further comprising freeze-drying the extract.
12. The method of claim 10 further comprising subjecting the extract to a  
chromatography to produce a fraction that includes the nutrient.
13. The method of claim 12 wherein the chromatography comprises size exclusion  
chromatography, and wherein the nutrient is selected from the group consisting of a

**AMENDED SHEET**

high molecular weight polysaccharide, a medium molecular weight polysaccharide, a low molecular weight polysaccharide, a polyphenolic caffeic acid, and caffeine.

14. The method of claim 12 wherein the chromatography comprises ion exchange chromatography, and wherein the nutrient is a polyphenolic caffeic acid.
15. The method of claim 10 wherein the coffee cherry is a sub-ripe coffee cherry.
16. The method of claim 10 further comprising a step of quick-drying the coffee cherry before comminuting the coffee cherry.
17. The method of claim 10 wherein the coffee cherry has a mycotoxin level of less than 20 ppb for total aflatoxins, of less than 10 ppb for total ochratoxins, and of less than 5 ppm for total fumonisins.
18. A method of marketing a food product comprising:  
providing a food product; and  
advertising that (a) the food product includes a coffee cherry or an extract of the coffee cherry, or (b) that the food product includes a nutrient that is isolated from the coffee cherry.
19. The method of claim 18 wherein the food product is selected from the group consisting of a beverage, a dietary supplement, and a snack.
20. The method of claim 18 wherein the nutrient is selected from the group of a polyphenol, caffeine, and a polysaccharide.